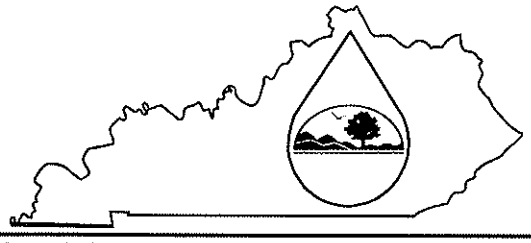
KPDES FORM SDAA



Kentucky Pollutant Discharge Elimination System (KPDES)

Socioeconomic Demonstration and Alternatives Analysis

The Antidegradation Implementation Procedure found in 401 KAR 10:030, Section 1(3)(b)3 requires KPDES permit applications for new or expanded discharges to waters categorized as "Exceptional or High Quality Waters" to conduct a socioeconomic demonstration and alternatives analysis to justify the necessity of lowering local water quality to accommodate important economic or social development in the area in which the water is located. This demonstration shall include this completed form and copies of any engineering reports, economic feasibility studies, or other supporting documentation

I. Project Information

Facility Name: FCDC Coal, Inc.

Location: Dana, KY	**County:Floyd**

Receiving Waters Impacted: Prater Creek

II. Socioeconomic Demonstration

1. **Define the boundaries of the affected community:**
(Specify the geographic region the proposed project is expected to affect. Include name all cities, towns, and counties. This geographic region must include the proposed receiving water.)

See Attachment II.1.A

2. **The effect on employment in the affected community:**
(Compare current unemployment rates in the affected community to current state and national unemployment rates. Discuss how the proposed project will positively or negatively impact those rates, including quantifying the number of jobs created and/or continued and the quality of those jobs.)

See Attachment II.2.A

II. Socioeconomic Demonstration- continued

3. The effect on median household income levels in the affected community:
(Compare current median household income levels with projected median household income levels. Discuss how proposed project will positively or negatively impact the median household income in the affected community including the number of households expected to be impacted within the affected community.)

See Attachment II.3.A

4. The effect on tax revenues of the affected community:
(Compare current tax revenues of the affected community with the projected increase in tax revenues generated by the proposed project. Discuss the positive and negative social and economic impacts on the affected community by the projected increase.)

See Attachment II.4.A

II. Socioeconomic Demonstration- continued

5. The effect on an existing environmental or public health in affected community:
(Discuss how the proposed project will have a positive or negative impact on an existing environmental or public health.)

See Attachment II.5.A

6. Discuss any other economic or social benefit to the affected community:
(Discuss any positive or negative impact on the economy of the affected community including direct and or indirect benefits that could occur as a result of the project. Discuss any positive or negative impact on the social benefits to the community including direct and indirect benefits that could occur as a result of the project.)

See Attachment II.6.A

III. Alternative Analysis

1. Pollution prevention measures:
(Discuss the pollution prevention measures evaluated including the feasibility of those measures and the cost. Measures to be addressed include but are not limited to changes in processes, source reductions or substitution with less toxic substances. Indicate which measures are to be implemented.)

See Attachment III.1.A

2. The use of best management practices to minimize impacts:
(Discuss the consideration and use of best management practices that will assist in minimizing impacts to water quality from the proposed permitted activity.)

See Attachment III.2.A

3. Recycle or reuse of wastewater, waste by-products, or production materials and fluids:
(Discuss the potential recycle or reuse opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

See Attachment III.3.A

III. Alternative Analysis - continued

4. Application of water conservation methods:
(Discuss the potential water conservation opportunities evaluated including the feasibility of implementation and the costs. Indicate which of, of these opportunities are to be implemented)

See Attachment III.4.A

5 Alternative or enhanced treatment technology:
(Compare feasibility and costs of proposed treatment with the feasibility and costs of alternative or enhanced treatment technologies that may result in more complete pollutant removal. Describe each candidate technology including the efficiency and reliability in pollutant removal and the capital and operational costs to implement those candidate technologies. Justify the selection of the proposed treatment technology.)

See Attachment III.5.A

III. Alternative Analysis - continued

6. Improved operation and maintenance of existing treatment systems:
(Discuss improvements in the operation and maintenance of any available existing treatment system that could accept the wastewater. Compare the feasibility and costs of improving an existing system with the feasibility and cost of the proposed treatment system.)

See Attachment III.6.A

7. Seasonal or controlled discharge options:
(Discuss the potential of retaining generated wastewaters for controlled releases under optimal conditions, i.e. during periods when the receiving water has greater assimilative capacity. Compare the feasibility and cost of such a management technique with the feasibility and cost of the proposed treatment system.)

See Attachment III.7.A

Kentucky Pollutant Discharge Elimination System (KPDES)
Instructions
KPDES Permit Application Supplemental Information

SECTION I – PROJECT INFORMATION

Facility Name:	Provide the name of the facility
Location:	Provide the physical location of the proposed project
County:	Indicate the county in which the facility is located
Receiving Water Name:	Indicate the water body into which the facility discharges or plans to discharge.

SECTION II – Socioeconomic Demonstration

For each factor provide a discussion of expected positive and negative impacts. Include appropriate support documentation.

SECTION III – Alternative Analysis

For each alternative compare the feasibility and costs of the alternative to the feasibility and costs of the proposed project and its treatment system. Include appropriate support documentation.

SECTION IV - CERTIFICATION

Name and Title:	Indicate the name and title of the person signing the form.
Telephone No.:	Provide the telephone number of the person signing the form.
Date:	Indicate the date which the form was signed.

This form being part of the permit application must be signed as follows:

Corporation: by a principal executive officer of at least the level of vice president
Partnership or sole proprietorship: by a general partner or the proprietor respectively

III. Alternative Analysis - continued

8 Land application or infiltration or disposal via an Underground Injection Control Well

(Discuss the potential of utilizing a spray field or an Underground Injection Control Well for shallow or deep well disposal. Compare the feasibility and costs of such treatment techniques with the feasibility and costs of .proposed treatment system.)

See Attachment III.8.A

9 Discharge to other treatment systems

(Discuss the availability of either public or private treatments systems with sufficient hydrologic capacity and sophistication to treat the wastewaters generated by this project. Compare the feasibility and costs of such options with the feasibility and costs of the proposed treatment system.)

See Attachment III.9.A

IV Certification: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name and Title:	**William Potter**	**Telephone No.:**	(606)285-3307
Signature:	William Potter	**Date:**	**1-21-2010**

PERMIT NUMBER

2.13 Signature of Operator or Authorized Agent

The undersigned, being first duly sworn, states that he/she has read all the information provided in form MPA-02, Operator Information For A Mining Permit, of this application and has found it to be true and correct. The undersigned further acknowledges that any information provided or omitted herein for the purpose of defrauding or misleading the Natural Resources and Environmental Protection Cabinet may result in criminal charges being instituted pursuant to applicable state laws.

Operator's Company Name FCDC Coal, Inc.

Name of Operator or Agent
Whose Signature Appears Below William Potter

Title Vice President Telephone (606) 285-3307

Signature of Operator or Agent* William Potter

Date of Signature 1-21-2010

Subscribed and sworn to before me by William Potter ,

This the 21 Day of January , 2010 .

Notary Public Marilyn Hallett

My Commission Expires 6-7-11 State in which Commissioned KY

***NOTE:** If signer is other than president or secretary of a corporation, attach a notarized copy of power of attorney, or resolution of board of directors which grants signer the legal authority to represent the applicant in this application. (Does not apply to a single proprietorship or partnership.)

Attachment II.1.A

The proposed operation is located in the central portion of Floyd County, Kentucky and is on the watershed of Prater Creek of the Big Sandy River. The proposed operation is located approximately 200 feet from the Dana Post Office. The proposed operation is for underground mining in the Elkhorn #3 coal seam.

Attachment II.2.A

Approximately 20 people will be employed as a direct result of this mine operation. It is estimated that another 150 will be indirectly employed. The employment rate in Eastern Kentucky over the last year has ranged from 7% to 10.5 %. The employment rate for the USA is at 10.2%. Mining jobs account for the majority of employment in Floyd County. Several operations have closed in the last six months, leaving the need for additional mining jobs at an all time high. This operation would give out-of-work miners and associated personnel the opportunity for employment. It would also allow for opportunities to train new personnel and provide experience for untrained workers.

Attachment II.3.A

The jobs made possible by this operation would provide higher wages than other jobs that exist in the county. Not only does this operation provide much needed jobs, but ones that are at a much higher wage rate. The average weekly wage for workers in the mining industry is $778.76 compared to other industries which is $545.49. This operation would provide an additional twenty jobs at the higher wage rate. This operation would have a very positive impact on the median household income in the county.

This operation would also improve the mine related businesses such as suppliers of material and equipment, engineering, and others. Not only does increase employment in the mining industry, but also in these related industries.

Attachment II.4.A

It is estimated that approximately 3 million clean tons of coal will be mined from this operation. At a rate of 15,000 clean tons per month to be mined, this operation should last approximately 200 months. There also exist the potential to add several more tons of reserve to the mine site in the future. With a coal severance tax rate of 4.5%, this operation would generate $135,000 in severance taxes for Kentucky. These taxes could be used to improve roads, schools, water lines, sewer systems, and other projects within the community. Additional payroll taxes would be collected within the county itself.

Attachment II.5.A

The positive and beneficial effects of this facility on the existing environment or public health are that the pre-law facility within the proposed permit boundary would be reclaimed under the standards of the Surface Mining Reclamation Control Act.

Otherwise, an old highwall and abandoned mine site would continue to exist. Water runoff from these previously disturbed areas enter the stream unregulated and unmonitored. This project would not only result in the elimination of highwall but the control and treatment of the drainage. The runoff during operations would be passed through a constructed sediment structure and monitored during the life of mining.

The proposed post mining land use for the project is forestland. The implementation of the post mining land use would result in quality trees being planted during the reclamation process in areas where no trees presently exist. This would aid to reducing erosion and improving water quality.

The operation would not only improve employment in the area, but also add tax revenue for both the state and the county.

The possible negative impacts from this project would include the following:

1. A potential for a temporary increase in dust and noise from the mine operation.
2. A temporary increase in traffic volume
3. An aesthetic impact due to the closeness of the operation to the county road.

Attachment II.6.A

This project would for experienced miners to continue to work within their community, maintaining their standard of living, reducing the need for additional travel expense necessary for finding employment elsewhere, and allowing for an overall better family life. The continued income to the state and county from payroll taxes and severance taxes allows for improvement in education, transportation, housing, recreation, and other benefits provided to the community such as fire departments, law enforcement, and ambulance services. All of this improves the standard of living and decrease the poverty levels within the community. The additional wages made by the employees allows for them to spend more within the community for such things has clothing, food, entertainment, and education. This serves to enhance the other businesses within the community.

Social benefits includes allow the miners to live at home so they can provide family support and be involved in the care of their children. They will be able to continue to be a part of the local churches, serve in community functions, and socialize with the neighbors. An improvement of the overall local economy should help to improve the social lives and ultimately result in reduced drug use, alcohol abuse and crime.

Attachment III.1.A

Alternative treatment works were investigative but found to be infeasible. The nearest water treatment system is approximately ten miles away. It would cost $2,112,000 for installation of line, not including the cost charged each month by the utility company for collection, to discharge to the treatment plant. A sediment pond would still have to be constructed at the plant to remove silt from the discharge. There is only one small

dugout structure proposed for this project, adjacent to the mine site. In stream construction of a sediment structure was considered and ruled out due to the amount of disturbance it would create and the additional construction cost, as well as potential for increased environmental harm. There were no existing silt structures within the area that could be used.

Other alternatives to building sediment ponds were considered including use of straw bales and or silt fences or direct discharge from the mine site to the stream channel. While all of these alternatives provide some retention of sedimentation, they are considered inadequate by the Division of Mine Permits for the amount of area affected by the mine face up, stockpile and spoil storage areas.

No effect alternative could be found, short of not opening the mine. This is not considered feasible due to the loss of revenue and coal to meet ongoing economic commitments.

Attachment III.2.A

FCDC Coal has a Best Management Practices Plan in effect for all of operations that will be applied to this operation as well. This plan will include for this site the following;

1. Minimize surface disturbance
2. Use of temporary silt control until final completion of silt structure
3. Rock check dams
4. Use of rock riprap in diversion ditches
5. Establish vegetation as soon as possible.
6. Strict adherence to the mining and reclamation plan above by the Division of Permits
7. All surface runoff will be diverted as required to the approved silt structures.

Attachment III.3.A

The sediment pond proposed for use under this project is very small, however it could considered to be used for some applications at the mine site. This would include use as a dust suppressant for watering roads and stockpiles. It could also be used for watering reclaimed areas. These activities only use a limit amount and can only be preformed at certain times. There would still be a limited amount of discharge even with these uses.

Attachment III.4.A

Water conservation would be implemented when the water from the pond is used for dust suppression, hydroseeding, and water reclaimed areas. Any water encountered during underground mining could be diverted to the pond.

Attachment III.5.A

One alternative treatment process considered was piping the discharge to the nearest treatment plant. At a cost in excess of 2 million dollars, this was considered infeasible. The option of trucking the discharge to the plant which would entail purchasing storage tanks, tank trucks, fuel and the cost for discharging into the plant. Based on the number of trips required, the number of necessary storage tanks, and all other cost, this opition is also not feasible.

Another option considered was the purchase of a small treatment plant. The purchase of a plant and the installation would have an estimated cost of $50,000. The cost to operate and maintain the facility is estimated to run around $10,000 per month. The small size of the area of the area available for this project also makes this alternative infeasible. There is limited space between the public road and the mountainous terrain at the back of the mine site. The limited space also makes the alternative of construction of limestone channels infeasible for this project. There is insufficient room for construction of the lengths of channel that would be required.

Attachment III.6.A

Other discharge locations were considered for this project. There were no existing structures near the project making it impossible to pump to another discharge location. The cost of pumping to the treatment plant is also infeasible, therefore ruling out the possibility of improving the existing treatment facility.

The proposed pond will be utilitized to ensure proper particle settling prior to off-site discharge. The pond will be constructed to the designs required by the Division of permits and will be monitored as required to ensure discharges meet the required standards.

Attachment III.7.A

Seasonal or controlled discharge options were considered for this project. Due to the peak storm of 25 year/ 24 hour storm, seasonal discharge is not feasible. The pond proposed is considered to be a controlled discharge.

Attachment III.8.A

Based upon available information from the USDA, no soils in this area are suitable for wastewater disposal. Based upon the USGS Quadrangle, no geologic formations were suitable for wastewater disposal. Also, any subsurface injection could possibly affect the aquifers currently being used for well water withdrawal for drinking purposes.

The land application considered was the use of ponds for evaporation purposes. Due the t limited size of the area and the terrain, there is inadequate surface area to construct the size pond that would be required. Also considered in this alternative is the annual rainfall in this area. The amount of rainfall would also make this alternative infeasible.

Attachment III.9.A

The use of existing treatment systems and existing ponds was evaluated. As previously discussed, the cost of using the closes existing treatment system makes this option to expensive. There were no known existing ponds within a mile of this project.